

Remarks**BEST AVAILABLE COPY**Status of the Claims

Claims 1-29 are pending in the application. All claims stand rejected. By this paper, claims 1, 6, 8-10, 13, 22-26, 28 and 29 have been amended. Claims 7, 11, 12, and 21 have been canceled. New claims 30 and 31 have been included to provide claim coverage commensurate with the scope of the invention. No new matter has been added. Reconsideration of all pending claims herein is respectfully requested.

Claim Rejections

Claims 10-13, 19, and 20 were rejected under 35 U.S.C. § 102(e) as being anticipated by Gaughan et al. ("Gaughan"). Claims 1-9, 14-18 and 21-29 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Gaughan in view of Canfield et al. ("Canfield"). These rejections are respectfully traversed.

References Do Not Disclose Progressively Reducing the Size of a PIP Image With Each Initiation of the Same Instruction Until Removing the Image After a Set Number of Initiations

Claim 1 has been amended to include the limitations of canceled claim 21. As amended, claim 1 recites:

providing a remote control to control images being displayed on the display area;

displaying a first image of a first type on the display area, the first image substantially filling the display area and having a first length and a first width, the first image having a first length-to-width ratio;

Initiating a first instruction on the remote control to modify the first image being displayed on the display area;

displaying on the display area a reduced version of the first image overlaid on a second image of a second type in response to the first instruction, the reduced image of the first image having a second length and a second width and having a second length-to-width ratio, the first and second values of the length-to-width ratio being substantially the same; and

progressively reducing the length and width of the first image while preserving its length-to-width ratio in response to a plurality of subsequent initiations of the first instruction by the remote control until removing the first image from the display area after a first set number of initiations.

These claimed features allow a user to (1) switch to a picture-in-picture (PIP) mode, (2) change the relative sizes of the main window and the PIP window, and (3) return to a full-screen (non-PIP) mode, all with a single button or control. Rather than having to navigate a menu, hunt for different buttons, or drag the corner of a television window with a mouse, the user may simply press the same button on the remote control to progressively reduce the size of the PIP window each time the button is pressed until the PIP window is removed from the display area after a certain number of button presses. This is much easier to do in the dark and eliminates the need for additional buttons on the remote control or specialized equipment, such as mice or keyboards. If the user continues to press the button, the system may restore the original screen configuration or, alternatively, begin to enlarge the PIP window until it eventually fills the entire screen. The process may continue in a closed-loop display cycle such that only a single button is required to select any desired display mode.

Gaughan, by contrast, merely discloses a conventional picture-in-picture (PIP) technique for displaying Internet video and television video. Like a PIP feature in

standard television sets, the user is limited to turning the PIP function on and off and swapping between what is shown in the smaller PIP window and the main window, *i.e.*, either the Internet video or the television video.

Unlike the claimed invention, however, Gaughan does not disclose progressively reducing the length and width of an already-reduced television window, let alone doing so through repeated initiations of the same first instruction via the remote control and ultimately removing the PIP window entirely and displaying the browser window by itself after a set number of button presses. Gaughan only refers to PIP on/off and swap controls. See FIG. 10 of Gaughan. Gaughan does not disclose turning off a PIP window with the same button used to progressively reduce the PIP window.

The addition of Canfield does not cure the deficiencies of Gaughan. As the Examiner correctly points out, Canfield discloses zooming a PIP window. However, Canfield does not disclose or suggest removing the PIP window after a set number of initiations of the same instruction. In fact, a portion of Canfield referred to in the Office Action actually *teaches against* this interpretation.

If the user directs the control micro to change the inset picture size, the control micro 1) directs the PIP unit to reinitialize the memory, 2) changes the parameters relating to the inset picture compression ratio and cropping, and 3) recalculates read address from current HC, VC, and the new inset picture size information. This process keeps the center of the new inset picture positioned over the same point on the big picture.

Col. 3, line 65 to col. 4, line 5 (emphasis added). Thus, during zooming, there will always be a "new inset picture" positioned over the same point in the new window. At no time does Canfield suggest that there will be no new inset picture as a result of zooming. Indeed, as the Examiner points out, Canfield refers to "80 ... different sizes

of inset pictures" (col. 4, line 44), but never once refers to using the zooming controls to remove an inset picture entirely.

Accordingly, the applicant respectfully submits that claim 1, as amended, is patentably distinct over the cited reference. Claims 10 and 26 include similar limitations and are likewise believed to be patentably distinct for at least the same reasons.

References Do Not Disclose Use of a Single Button to Enter a PIP Mode, Zoom the PIP Window, and Exit the PIP Mode

Original claim 5 recites that the remote control has a single button to input the instructions (entering PIP mode, zooming, exiting PIP mode). By contrast, as shown in FIG. 6, Canfield discloses separate buttons from zooming in and zooming out, as well as for turning the PIP function on and off (208) within the PIP / Surround Control section of the remote control.

Claim 5 is therefore believed to be patentably distinct over the cited references. Claim 8 has been amended to include similar limitations and is likewise believed to be patentably distinct.

References Do Not Disclose Progressively Enlarging the Size of a PIP Image With Each Initiation of the Same Instruction Only the PIP Image Remains on the Screen After a Set Number of Initiations

Claim 6 has been amended to include limitations from original claims 25 and 26. Claim 6 is similar to claim 1 except that the PIP window is *enlarged* with each initiation of the same instruction (e.g., button on the remote control) until the PIP

window completely overlays the background image, thus returning to a non-PIP mode.

As noted above, Gaughan merely recites a static PIP window that can be turned on or off. Gaughan does not disclose or suggest zooming. Canfield, however, does not cure the deficiencies of Gaughan. As discussed above, Canfield teaches away from transitioning to a non-PIP mode through zooming. If the PIP window could be enlarged to completely overlay the background window, this would not "keep the center of the new inset picture positioned over the same point on the big picture," as required by Canfield. Indeed, there would be "no big picture" on the screen, and the PIP window would no longer be an "inset picture" because there would be nothing to be inset from. Canfield's system would be rendered inoperable.

References Do Not Disclose Enlarging/Reducing a PIP Window in a Closed Loop Display Cycle

Claims 22, 23, 25, 26, and 28 variously recite reduction and enlargement of the PIP window and/or restoring it to its original size in closed-loop display cycle after a set number of initiations of the first instruction by the remote control. Thus, after reducing a PIP window until it is completely removed, the user may continue to press the same button to restore the PIP window to its original size, either immediately or through a series of enlargements, all with a single control.

As discussed above, Gaughan does not disclose any type of zooming. The size of his PIP window is fixed. Canfield discloses enlargement/reduction of a PIP window by pressing "ZOOM IN" and "ZOOM OUT" buttons. However, the clear functionality of these buttons actually *teach away* from a closed-loop display cycle. A

user would not expect that repeatedly pressing a "ZOOM IN" button would begin reducing the size of the PIP window, only to have it begin to be enlarged after a certain number of button presses in a closed-loop display cycle. The "ZOOM IN" button would be providing both enlargement and reduction functionality, contrary to the ordinary meaning of "zoom in."

Likewise, no one would expect that repeated pressing of the "ZOOM OUT" button would begin to enlarge the size of the PIP window, only to have it begin to be reduced after a certain number of button presses. The claimed closed-loop display cycle is completely contrary to a button that ostensibly will continue to reduce the PIP window to a particular point along the spectrum of 80 different sizes disclosed by Canfield. See col. 4, line 44.

New Claim 30

New claim 30 recites a remote control for an interactive television system comprising:

- a first button for initiating the display of a full-screen browser image in a user interface for the interactive television system;

- a second button for initiating the display of a reduced-size television image over a portion of a full-screen browser image in the user-interface;

- a third button for initiating the display of a reduced-size browser image over a portion of a full-screen television image in the user interface; and

- a fourth button for initiating the display of a full-screen television image in the user interface.

These claimed features allow a user to quickly select between four different PIP display modes by including specifically-designated buttons for those modes on a

remote control. Two buttons are provided for entering non-PIP modes, e.g., browser-only or TV-only. Likewise, two buttons are provided for different PIP modes, e.g., reduced-size TV image over browser and reduced-size browser over TV image.

As discussed above, Gaughan does not disclose zooming. While Canfield shows a "swap" button in FIG. 6, it has no functionality unless the user has entered PIP mode by pressing the on/off button (206). Thus, while watching TV or browsing the internet, the user cannot immediately switch to a desired PIP mode, e.g., TV over browser configuration or a browser over TV configuration, as in the claimed invention.

New Claim 31

New claim 31 recites a system comprising:

- a client terminal; and

- a remote control device for the client terminal, the remote control device comprising a single mode button for cycling between a plurality of display modes in a user interface for the client terminal, the display modes comprising:

- a full-screen browser image;

- a reduced-size television image over a portion of a full-screen browser image;

- a reduced-size browser image over a portion of a full-screen television image; and

- a full-screen television image.

Claim 31 recites similar modes to those of claim 30, but provides access to those modes through a single mode button. A user presses the button repeatedly to cycle between the four recited display modes. By contrast, in either Gaughan or Canfield, a user would need to use, at least, a PIP on/off control and a separate

"swap" control to achieve similar functionality, which is slower and more difficult to execute in a darkened room.

Conclusion

The applicants respectfully submit, therefore, that at least claims 1, 6, 8-10, 13, 22-26, and 28-31, as discussed above, are patentably distinct over the cited references, alone or in combination. All other claims depend directly or indirectly from one of the foregoing claims. Accordingly, all claims are believed to be in condition for allowance. A Notice of Allowance is respectfully requested.

If any issues remain after this response, the Examiner is invited to contact the undersigned at the telephone number provided below.

Respectfully submitted,

Digeo, Inc.

By


Kory D. Christensen
Registration No. 43,548

STOEL RIVES LLP
One Utah Center Suite 1100
201 S Main Street
Salt Lake City, UT 84111-4904
Telephone: (801) 328-3131
Facsimile: (801) 578-6999

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